Pre Calc / Trig 3

Chapter 2 Test review

**2.1 Quadratic functions:**

**Find the roots by completing the square:**

1.  2. 

**Find the roots using any method:**

3.  4. 

**Graph the quadratic function. Identify the axis of symmetry, the vertex and the roots.**

5.  6. 

**2.2 Polynomial functions of higher degrees:**

**Sketch the graph of the following functions:**

7.  8. 

**Find the polynomial function whose roots are given:**

9.  10. 

**2.3 Polynomial and Synthetic Division:**

11. One of the factors of is . Find all the factors and roots of *f*.

**2.4 Complex numbers:**

12. Write in standard form. 13. Find the polynomial function whose roots are

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**2.5 Zeros of polynomial functions:**

**Find the zeros of the polynomial function. Graph the function:**

14.  15. 

**Find the irrational zeros of the function:**

16. 

**2.6 Rational Functions:**

**For each of the following functions, list all asymptotes and holes. Find several extra points. Graph the function:**

17.  18. 

19.  20. 

21.  22. 

**2.7 Non-Linear Inequalities:**

**Solve the inequality. Graph answers on a number line. Give answers in interval notation.**

23.  24. 

25. 